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AMENDMENT TO TIME CRITICAL REMOVAL ACTION AIR MONITORING PLAN FOR THE FORMER VIEQUES NAVALTRAINING RANGE AMENDMENT MEMO 1 NEAR SOURCE NETWORK STATION RELOCATION VIEQUES ISLAND PUERTO RICO

03/01/2007

CH2M HILL

Amendment to

Time Critical Removal Action Air Monitoring Plan for the Former Vieques Naval Training Range

Amendment Memo 1—"Near Source" Network; Station Relocation

U.S. Navy

Contract Task Order 0047

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Prepared for

Naval Facilities Engineering Command

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Prepared by

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Herndon, Virginia

1.0 Summary

The object of the air monitoring program at the former Vieques Naval Training Range (VNTR) is to address the air quality impact of the time critical removal action (TCRA) and document that offsite concentrations of constituents emitted from open detonations of munitions associated with a TCRA do not exceed National Ambient Air Quality Standards (NAAQS), or pose a threat to human health or the environment.

Since the writing of the Final Monitoring Plan (CH2M HILL, 2005), amended in this document, the network used for monitoring the TCRA activities has become known as the "Near Source" network. This amendment to the Final Monitoring Plan for the "Near Source" monitoring network provides clarification on various aspects of monitoring, data management and reporting dates as well as details regarding the re-location of one monitor. This monitor is being moved from the existing 'Boathouse' site in the Surface Impact Area (Figure 1) to a temporary site nearer to populated areas on the Island of Vieques. The remaining monitors will continue to be operated while the monitor at the temporary site is operated.

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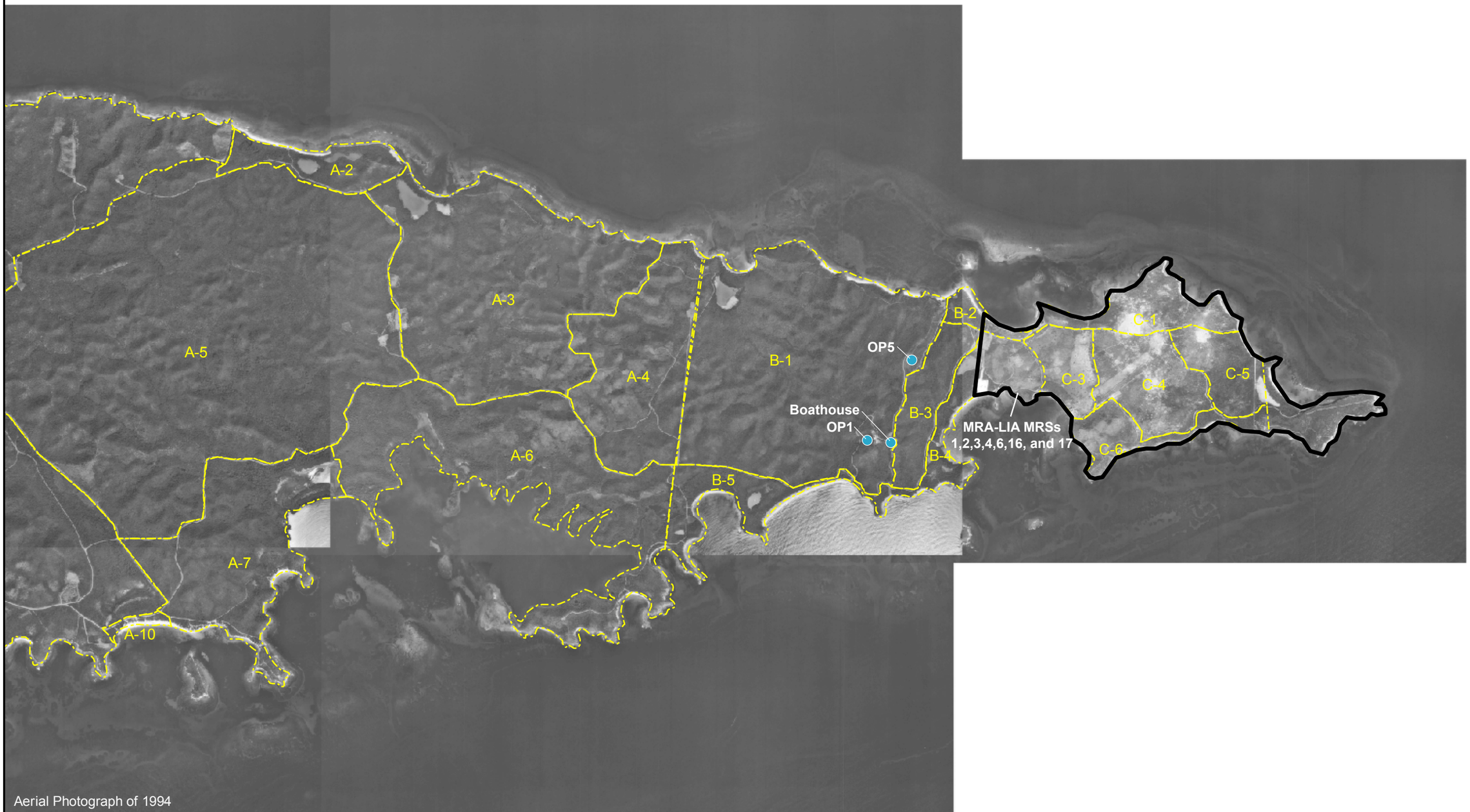

LEGEND

- Interior Island MRS
- A-5 Parcel Boundary and Designation
- Air Monitoring Station

N
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0 2,000 4,000 6,000 Feet

FIGURE 1
AIR MONITORING STATION LOCATIONS
FORMER VNTR, VIEQUES ISLAND, PUERTO RICO
SEPTEMBER 2005

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2.0 Temporary Site Location

2.1 Temporary Site Objectives and Configuration

Three portable E-BAM samplers were initially placed within the SIA near the western boundary of the LIA. Samplers will remain at OP-5 and the 'Boathouse'. The "temporary" site is west of Camp Garcia, near the area boundary.

The temporary site is to be used to address community concerns regarding emissions from the BIP activities. One solar powered E-BAM PM_{10} monitor with integrated wind speed and wind direction sensors is to be moved from the Boathouse to the site (referred to as Location 6 in the Site Assessment and on Figure 2). Location 6 is a temporary site, used to monitor PM_{10} concentrations from the BIPs in accordance with the approach, methodology, and data capture objectives for the 'near source' BIP monitoring network.

Location 6 is gently sloped and heavily vegetated with footpath access. In order to be used as a PM_{10} monitoring site, the vegetation at the site will be cleared as described in the "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)" (EPA-450/4-87-007, May 1987). A clearing will be made in the trees of sufficient size to ensure 10 meter horizontal clearance from the trees in all directions. The air quality sampler inlet will be placed at least 10 meters (~33 feet) from the dripline of any trees remaining after the site is cleared. The clearing will remain vegetated to the extent possible to prevent windblown dust in the cleared area which could interfere with the PM_{10} measurements. Existing grass or other ground cover will be kept trimmed to remain well below the height of the sampler inlet. The sampler inlet height will be between 2 and 7 meters above the ground. The site will be fenced.

2.2 Assessment of the Temporary Site

On March 2, 2007, Mr. Douglas Murray (TRC), visited the proposed air quality monitoring site at the invitation of the Navy and accompanied by Ms. Wilmarie Rivera (Commonwealth of Puerto Rico Environmental Quality Board) and Mr. Daniel Rodriguez (U.S. Environmental Protection Agency). Location 6 was proposed by the Navy to address the community's concern regarding air quality exposure to blow in place activities. The purpose of the visit was to assess the proposed site as a potential PM_{10} monitoring site. Based on readings from a global positioning system (GPS), the site is at approximately 65 degrees 25.62 minutes west longitude and 18 degrees 7.73 minutes north latitude at an elevation of 270 feet above sea level. The site is near the western boundary of the Fish and Wildlife Service property and within about one-quarter mile of a residential area. Concentrations monitored at this site are anticipated to be representative of concentrations in the nearby community.

The following information is email correspondence regarding the temporary re-location of one of the "near source" network monitors from the SIA to a site closer to populated areas:

From: Penny, Christopher T CIV NAVFAC Lant
[mailto:christopher.penny@navy.mil]
Sent: Monday, February 26, 2007 12:14 PM
To: rodriguez.daniel@epa.gov
Cc: Iglesias.Ariel@epamail.epa.gov; Madeline Rivera; oscar_diaz@fws.gov; Tomik, John/VBO; esokir2004@yahoo.com; Cloe, Kevin R CIV NAVFAC Lant; Martin, Stacin/VBO; Brant, Byron C CIV NAVFAC Lant
Subject: FW: Air Monitoring Station

Danny,

I have received concurrence from EQB on the location of the proposed (temporary) location for the portable air monitoring station. The Navy and EQB propose location # 6 due to time, safety, and security constraints. Pls verify EPA's concurrence on this location. If you do not agree on this location pls advise of another location on FWS property and rationale as soon as possible. I would like to get concurrence from all so we can initate the relocation and installation within the next two weeks.

Madeline will be contacting you, Oscar, and Wilmarie to set up a field site visit to ascertain that this location is satisfactory to all from a technical, quality, and security perspective.

Oscar, Pls attend this site visit. We will need your/FWS concurrence as well since this relocation of the air monitoring station from the Boat House to the placement of it at location (6) is under your jurisdiction.

Thanks,
Chris

From: wilmarierivera@jca.gobierno.pr
[mailto:wilmarierivera@jca.gobierno.pr]
Sent: Monday, February 26, 2007 7:43
To: Penny, Christopher T CIV NAVFAC Lant
Cc: CarlosWLopez@jca.gobierno.pr; yarissaaymee@yahoo.com; yarissamartinez@jca.gobierno.pr
Subject: Air Monitoring Station

Mr. Penny,

As our recent telephone conversation, and taking into consideration the need for this air monitoring to be in place as fast as possible, EQB has agreed with the proposed location #6 for the relocation of the air monitoring station that is currently on the boat house in the LIA. However, we understand the western perimeter fence could have satisfied the community's concern better, but we can understand the safety and time constraints.

If you have any doubts or questions, please let me know. You can contact me at (787) 767-8181 ext. 3214.

Wilmarie Rivera
Puerto Rico Environmental Quality Board

TABLE 1
Potential Air Monitoring Location Analysis: Former VNTR, Vieques, Puerto Rico

Location ID (see attached Figure 1)	Location Advantages	Location Disadvantages	Recommended as Potential Location	Relative Ranking
Location 1	Close to site boundary and residential area. Easy accessibility for maintenance and sample collection.	Not secure. Easily accessible by trespassers. Subject to vandalism and theft. Sample integrity may be compromised due to unauthorized personnel interfering with system operations. Infrastructure will need to be built.	No	--
Location 2	Close to site boundary and residential area. Easy accessibility for maintenance and sample collection.	Not secure. Easily accessible by trespassers. Subject to vandalism and theft. Sample integrity may be compromised due to unauthorized personnel interfering with system operations. Infrastructure will need to be built.	No	--
Location 3	Close to site boundary and residential area. Easy accessibility for maintenance and sample collection.	Not secure. Easily accessible by trespassers. Subject to vandalism and theft. Sample integrity may be compromised due to unauthorized personnel interfering with system operations. Infrastructure will need to be built.	No	--
Location 4	Close to site boundary and residential area. Easy accessibility for maintenance and sample collection.	Not secure. Easily accessible by trespassers. Subject to vandalism and theft. Sample integrity may be compromised due to unauthorized personnel interfering with system operations. Close proximity to landfill, which may impact sample results due to particulates generated from the landfill activities. Infrastructure will need to be built.	No	--
Location 5	Close to site boundary and residential area. Easy accessibility for maintenance and sample collection.	Not secure. High visibility. High traffic area, which may impact sample results due to particulates generated from vehicles and roadway. Easily accessible by public. Potential for vandalism and sample integrity to be compromised. Infrastructure will need to be built.	No	--
Location 6	Close to site boundary and residential area.	Not secure. Vegetation clearance and minor road repairs required to access location. Infrastructure will need to be built. Evidence of trespassers.	Yes	2
Location 7	Easy accessibility for maintenance and sample collection. Power source, so solar power will not be needed. Secure area (guarded). Approximately 5000 feet from residential area.	Approximately 5000 feet from site boundary and residential area.	Yes	1
Location 8	Somewhat isolated and can be accessed by Camp Garcia guard for observation. Approximately 4800 feet from site boundary and residential area.	Difficult access. Vegetation clearance will be required to access area. Infrastructure will need to be built. Approximately 4800 feet from site boundary and residential area.	Yes	3

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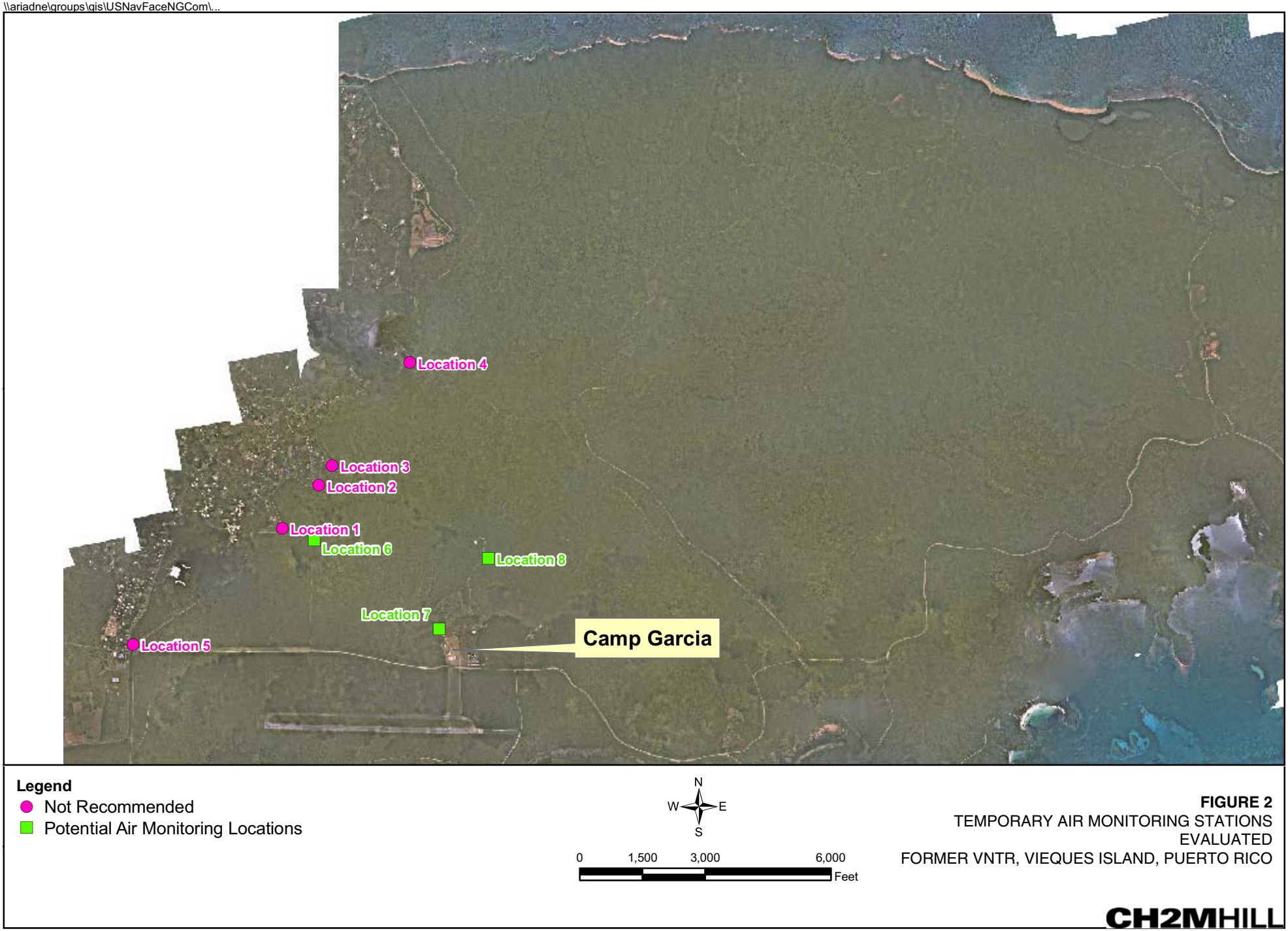

FIGURE 2
TEMPORARY AIR MONITORING STATIONS EVALUATED
FORMER VNTR, VIEQUES ISLAND, PUERTO RICO

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3.0 Monitoring Program Description

The BIP monitoring is intended to be approximately 8 hours prior to, during, and 16 hours after a BIP. Location 6 will be used with the E-BAM until permanent sites are identified for the 'Prescribed Burn' Compliance monitoring stations (with EPA equivalent method devices) and those stations are installed. Location 6 does not have power or any other infrastructure, so it will not support an EPA designated/equivalent method for PM_{10} as those monitoring methods require an AC power line. The E-BAMs were chosen for the near source network because they do not require utility infrastructure when configured for solar power. Since Location 6 is a temporary monitoring site and is only to be used for the BIPs, no additional meteorological instruments or towers are to be installed there.

3.1 Field Documentation Procedures

Field operators are required to keep accurate written records of their activities. Data recorded includes site visits, maintenance and calibration activities, field measurements, conditions, and other information pertinent to sample collection.

The PM_{10} monitor is visited a minimum of every other week. Any needed maintenance or troubleshooting for the monitors will take place at this time. As part of the QA program, a site visit log was developed to guide technicians performing site visits. This form can be used to log all activities at the site, even when an inspection is not conducted. The data manager is able to use the site documentation as an additional tool for data validation. The originals of the completed log sheets are kept with the data manager.

3.2 Data Reporting

Analytical results are reported by each of the two laboratories within 4 weeks of sample receipt. After the data have been reviewed, data reports will be prepared. These reports will summarize the data gathered and discuss the data review process and QA activities**.** The quarterly data reports will be submitted to the Navy.

Final data reports will include 24-hour averages of PM_{10} data for the day before, during, and after a BIP event. The data completeness (i.e., the percent of valid data for each parameter) will be summarized monthly and quarterly. In addition, any QA activities, including the results of performance audits and the yearly calibration certifications will be presented.

The data capture goals for this project are to monitor for 8 hours prior and 16 hours following a TCRA event. This project has set a PM_{10} completeness goal of 75 percent, which exceeds the goal based on EPA completeness criteria as defined in the previously referenced guidance documents. To meet this completeness goal, 75 percent of 8 hours prior and 16 hours following a TCRA event must be consolidated.

The quantitative data will be processed and reported quarterly within the later of 60 days of the end of each quarter or 30 days from receipt of the data from the laboratories. PM_{10} data is available on the Web site on a near-real-time basis. Qualitative PM_{10} data will be available on a fast-track basis and will be provided within 1 week of availability.